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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,810	09/22/2003	Jurgen Stohrer	STOHRER ET AL-3	2169
25889	7590	04/28/2005	EXAMINER	
WILLIAM COLLARD COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			CHANG, CELIA C	
			ART UNIT	PAPER NUMBER
			1625	

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/667,810

Applicant(s)

STOHRER ET AL.

Examiner

Celia Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. Applicant's election with traverse of group I claims 1-20 process wherein the nitroxyl compound is selected from TEMPO etc in one or two phase system in the reply filed on Dec. 21, 2004 is acknowledged. The traversal is on the ground that TEMPO and other nitroxyl compounds are not independent and distinct since search for TEMPO would encompass all other similar compounds. This is not found persuasive because all nitroxyl compounds are not identical and broadly the claims to nitroxyl compound would encompass catalyst of US 2004/0063932 for which no structural analogy can be found with TEMPO.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-20 limited to TEMPO analogs are examined. The remaining subject matter are withdrawn from consideration per 37 CFR 1.142(b).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2, 4-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. US 6,127,573 in view of Azerbaev et al. CA 79:126292.

Determination of the scope and content of the prior art (MPEP §2141.01)

Li et al. '573 generically disclosed the instant claims, see formula I and II, R1 is C2-C8alkynyl col. 1 line 65 or substituted alkynyl col. 2, lines 4-9) i.e. alkynyl alcohol to alkynyl carboxylic acid using buffer of pH4-8, TEMPO, Hypochlorite, temperature between 0-50°C, biphasic reaction (see col. 2-4) i.e. all the limitations of the base claim and dependent claims.

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Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference is that an example of the process using 2-propyn-1-ol or 2-butyne-1,4-diol was not exemplified. A species anticipated the instant genus is disclosed see col. 7-8 compound 1h and 2h. An explicit reaction condition for this exemplified species was not delineated. General conditions are found in example 1, wherein buffer solution of pH6.7 was preferred. Azerbaev et al. CA 79 :126292 delineated the mechanism of oxidation of alkynyl alcohol i.e. 2-propyn-1-ol, to the corresponding carboxylic acid and specifically delineated the formation of intermediary compounds upon oxidation with the explicit teaching that KOH would favor the transformation of intermediates into the alkynyl carboxylic acid final product.

Finding of prima facie obviousness—rational and motivation (MPEP§2142-2143)

One having ordinary skill in the art is in possession of the Li reference is in possession of the general conditions and guidelines of the operability of the claimed process. Li et al. '573 further provided sufficient examples for one skilled in the art to pick and choose variations within the general guidelines. Thus, the modification of the instant claims is an "effect" oriented choices among the guidelines clearly delineated by Li, which is the skill of the chemical art. The teaching of Azerbaev et al. further provided motivation to one in possession of the Li reference to choose the higher pH conditions for the particular reactant. Because in choosing the specific product of 2-propyn-1-ol the higher range of Li would have a stabilizing effect favorable to product formation for the particular species.

Operating a known process i.e. Li et al. continuously is considered prima facie obvious. In re Fong 154 USPQ 25, in re Kronig 190 USPQ 425, In re Dillon 13 USPQ2d 1337.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. US 6,127,573 in view of Azerbaev et al. CA 79:126292 further in view of Merbouh et al. US 6,498,269.

The finding of prima facie obviousness over claims 1-2, 4-20 has been clearly delineated supra and hereby incorporated by reference.

The limitation of claim 3 using a phase transfer catalyst is an art recognized modification of the biphasic system as taught by Li et al. '573. Merbouh et al. '269 is analogous art since the process oxidized primary alcohol functional group (see col. 2 line 63) i.e. the same field of endeavor as Li, and Azerbaev. Merbouh et al. '269 taught that a phase transfer catalyst is a nature inclusion in a biphasic system since such inclusion would ensure operation yet maintain easiness in recovery of the heterogenic nitroxide catalyst.

Operating a known process continuously is considered prima facie obvious. In re Fong 154 USPQ 25, in re Kronig 190 USPQ 425, In re Dillon 13 USPQ2d 1337.

4. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/365,887 in view of Li et al. '573, Azerbaev and Merbouh.

Determination of the scope and content of the prior art (MPEP §2141.01)

The copending claims in SN 10/365,887 is drawn to more specific quantity of the reactant which are fully encompassed by the instant claims.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the copending claims and the instant claims is that the copending claims are limited to pH less than 7, while the instant claims are pH is greater than 7. In addition, dependent claims of the instant included the more specific species and phase transfer catalyst and continuous operation.

Finding of prima facie obviousness—rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the instant claims prima facie over the copending claims since the claims incorporated all the elements of the copending claims with modification well recognized in the analogous art being obvious modification for such process and it has been clearly delineated in the previous rejections (see sections 2 and 3).

This is a provisional obviousness-type double patenting rejection.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).


Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celia Chang whose telephone number is 571-272-0679. The examiner can normally be reached on Monday through Thursday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang, can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OACS/Chang  
Apr. 21, 2005

  
Celia Chang  
Primary Examiner  
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